

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the previous amendments and following remarks.

Claims 1-12 are pending. By this Amendment, claims 1, 2 and 9 are amended and new claim 12 is added. No new matter has been added.

The Office Action rejects claims 1 and 9 under 35 U.S.C. §103(a) over U.S. Patent No. 5,357,066 to *Morel et al.* in view of U.S. Patent No. 5,281,776 to *Morel et al.* and U.S. Patent No. 5,448,033 to *Leone et al.*; and rejects claims 1-11 under 35 U.S.C. §103(a) over U.S. Patent No. 4,401,863 to *Lemmer et al.* in view of *Leone*. These rejections are respectfully traversed.

Applicants' independent claim 1, recites, in combination with other claimed features, a switching device comprising a gas flow opening provided in a frame and arranged for a first part of a gas flow produced by a switching event. The first part of the gas flow is the part that is produced between a first connector and a means for connection. The first connector includes a hole formed in a portion of the first connector located inside the frame. The hole is provided for the first part of the gas flow and is located and dimensioned such that a substantial portion of the first part of the gas flow will flow through the hole.

Such features encompass Applicants' exemplary embodiment as illustrated in Fig. 1 where the first connector 4 and the second connector 6 are provided inside frame 2 with means for electrically connecting the first and second connector. Gas flow openings 10 and 11 are provided in the frame between an interior and an exterior frame to allow the gas flow between an inner part of the frame and the surrounding environment of the frame. First connector 4 includes a hole 12 located

and dimensioned such that a substantial portion of a first part of the gas flow will flow through the hole. The first part of the gas flow is produced by a switching event and is produced between the first connector and the means for connecting.

The *Morel '066* patent discloses a switching device comprising a frame 8, a first connector 7a, a second connector 7b and rotary contact 3 for connecting the first and second connector electrically to one another. There are no gas flow openings provided in the frame 8 or a hole formed in a portion of the first connector 7a as recognized by the Examiner. The description of the *Morel '066* patent does not address gas flow and also provides no motivation for providing a feature of current splitting.

Applicants respectfully disagree with the Examiner's assertion that the ordinarily skilled artisan would have been motivated to combine the *Morel '776* patent with the *Morel '066* patent to provide the features of Applicants' independent claim 1. The *Morel '776* patent provides openings 44 for the outflow of breaking gases to the outside of a box 12. If the ordinarily skilled artisan were to provide the frame 8 of the *Morel '066* patent with the openings 44 of the *Morel '776* patent, he would provide the openings in the left wall of the frame 8 adjacent the breaking chamber 6a. This allows the gas flow to propagate between the extinguishing plates to cool the gas flow which makes the gas flow electrically less conductive and reduces a danger of a short circuit. To place the gas flow openings anywhere else would not be logical.

The *Morel '066* patent discloses a first connector 7a located inside the frame 8 and is embedded in the material of the frame. The only cavities inside the frame 8

are provided for breaking chamber 6a, 6b and for movement of the rotary contact 3 to connect the first and second connector.

The Examiner recognizes that the *Morel '066* patent does not provide an opening in the first connector. Applicants respectfully disagree with the Examiner's assertion that the ordinarily skilled artisan would have been motivated to provide the current splitting holes of the *Leone* patent to overcome the deficiencies of the *Morel '066* patent. If the current splitting holes of the *Leone* patent were provided in a portion of the first connector 7a located inside the frame and was adapted to conduct an electric current of the current circuit in a closed state of the switching device, the hole would not be suitable for a gas flow because gas would not be able to travel through the hole as the material of the frame would cover the hole.

In claim 1, as amended, the first part of the gas flow, flows through the hole in the first connector and through the opening in the frame. A combination of the *Morel '066* patent and the *Morel '776* patent could not feasibly provide this arrangement. As argued above, the location of the opening in the frame 8 of the *Morel '066* patent as well as the location of a hole in the first connector 7a embedded in the frame material, would preclude such an arrangement.

Also, there is no motivation in the *Morel '066* patent to split the current as suggested by the *Leone* patent. The Examiner has provided no motivation to combine the references other than stating that the references would be combined in order to split the current.

Applicants' independent claim 9 recites, in combination with other claimed features, a switching device comprising a frame having a gas flow opening provided between an interior and an exterior of the frame and adapted for a first part of a gas

flow produced by a switching event to exit the switching device. The first part of the gas flow is the part that is produced between the first connector and the means for connecting. The switching device has a gas flow channel adapted for the first part of the gas flow to travel towards a gas flow opening. The gas flow channel includes a hole provided in a portion of the first connector located inside the frame. The hole formed in the first connector is located and dimensioned such that a substantial portion of the first part of the gas flow will flow through the hole. Claim 9 is allowable for at least the reasons discussed above with respect to independent claim 1.

Thus, Applicants' independent claim 1 and 9 are distinguishable over the *Morel '066*, *Morel '776*, or the *Leone* patents, either alone or in combination.

The *Lemmer* patent discloses a switching device comprising a frame 1, 2, a first connector 3, a second connector 4 and means for connecting the first and second connector electrically to one another. In paragraph 5 of the Office Action, the Examiner alleges that the gap between the means for connecting 7, 18 and the plates form a gas flow opening. As shown in Fig. 1 of the *Lemmer* patent, the alleged gas flow opening is located substantially above the contact point of the stationary contact piece 5 and contact piece 20. Thus, a first part of the gas flow produced by a switching event would inherently propagate upwards.

If one would provide the first connector 3 with a current splitting hole, as disclosed in the *Leone* patent, the current splitting hole would be located below the place or formation of the first part of the gas flow, that is the contact point of the stationary contact piece 5 and the contact piece 20. The first part of the gas flow would propagate upwards to the alleged gas flow opening. Specifically, the first part of the gas flow would propagate away from the current splitting hole. Further, it is

likely that the current splitting hole would be located in a horizontal bar portion 3c located against the bottom of the frame and therefore the gas flow would not propagate through the current splitting hole at all. A combination of the current splitting hole of the *Leone* patent and the first connector 3 of the *Lemmer* patent would result in a portion of the first part of the gas flow that would not flow through the current splitting hole since the current splitting hole would be located where this would not happen.

Thus, Applicants' independent claims 1 and 9 are distinguishable over the *Lemmer* patent and the *Leone* patent either alone or in combination.

The independent claims are allowable for at least the reasons discussed above as well as for the individual features they recite. In addition, new independent claim 12 is distinguishable over the cited references.

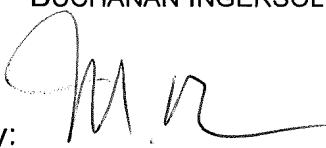
Early and favorable action with respect to this application is respectfully requested.

Should the Examiner have any questions regarding this Amendment or the application in general, she is invited to contact the undersigned at the number provided below.

Respectfully submitted,

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